

JUN 26 1992

**Federal Communications Commission
Office of the Secretary**

PR Docket No. 92-80
RM 7909

No. of Copies rec'd.
List A B C D E

TABLE OF CONTENTS

	<u>Page</u>
Roman Catholic Communications has Pioneered ITFS and looks to Commission to not Sacrifice that Valuable Educational Service in order to Grow a Competitor to Cable TV.....	1
Mountainous Environments not Appropriately Provided For.....	3
Directional Operation more Appropriate Alternative to Distance Separation.....	4
Assumed Antenna Heights in Notice not Reflective of Unique Characteristics of Mountainous Areas.....	5
ITFS is Fearful of Unlicensed Boosters.....	6
Proposal Endorsed to Continue C/I Protection Ratios to ITFS.....	6
Requiring ITFS to Protect MDS Disserves Instructional Television.....	7
30-Day Period Unrealistically Short for ITFS to Report Interference from New MDS Operations.....	8
Changing Application Processing Bureau seems Unlikely Solution.....	9

RECEIVED

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

JUN 20 1992

**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY**

In the Matter of)	
)	
Amendment of Parts 1, 2, and)	
21 of the Commission's Rules)	PR Docket No. 92-80
Governing Use of the Frequencies)	RM 7909
in the 2.1 and 2.5 GHz Bands)	

Notice of Proposed Rule Making

**COMMENTS
of
ROMAN CATHOLIC COMMUNICATIONS CORPORATION
OF THE BAY AREA**

The Roman Catholic Communications Corporation of the Bay Area, a nonprofit religious corporation, responds to the Notice of Proposed Rule Making and hereby enters its Comments in this matter.

**Roman Catholic Communications
has Pioneered ITFS and looks
to Commission to not Sacrifice
that Valuable Educational
Service in order to Grow a
Competitor to Cable TV**

Roman Catholic Communications and its predecessors are pioneers in the use of educational television for in-school and other educational purposes. Its first application to the FCC goes back to 1965, and Roman Catholic is in its 23rd year of continuous operation, now in the service of the Dioceses of San Francisco, Oakland, San Jose, Sacramento, and Stockton. Roman Catholic Communications operates four transmitters, five separate sites, three earth stations, and eight video recorders. Main studios, color-equipped, are in Menlo Park. From one diocese in 1970, Roman

Catholic Communications now covers the five dioceses serving a Catholic population of 1,664,231 and more than 150 schools. In short, Roman Catholic Communications believes in, and is a prime participant in, the ITFS service, and has dedicated effort and resources to the technology.

In the subject proceeding the Commission is, again, openly and forthrightly aiming to encourage MMDS and to facilitate the availability of that wireless service as a competitor to cable television. The Roman Catholic Communications Corporation of the Bay Area has no quarrel with the Commission's zeroing in on the MMDS backlog. Surely, that backlog is a growing embarrassment, and just plain, old-fashioned service to the public demands that urgent steps be taken to deal with it. At the same time, however, Roman Catholic Communications hopes that the continuing and pressing needs of the ITFS service will not be run over or overwhelmed in the rush to cure the perceived need to rein in cable television by unleashing MMDS. In balancing the needs of the various groups competing for available spectrum space, other solutions, short of taking it out on ITFS, should be explored.

The Notice, at ¶5, restates the Commission's intent to honor its commitment to safeguard the operations of ITFS licensees. And at ¶15, the Notice, recognizing ITFS "as an effective source of the distribution of educational material," considers additional measures of protection for ITFS against MMDS encroachment. Even with all of these assurances, however, Roman Catholic Communications would direct the Commission's attention to a number of

proposed changes that cause concern.

**Mountainous Environments not
Appropriately Provided For**

The proposed rule changes are based on the premise that MDS operations are typically omnidirectional, operating from antennas erected at low heights which, if they happen to lie within a prescribed distance from another licensed MDS or ITFS operation, can simply be moved to comply with a minimum separation distance. While this may be available in certain areas of the country where the terrain is flat and the population evenly distributed, it certainly is not the case in the mountainous regions of the country, such as the San Francisco Bay Area where Roman Catholic Communications is in operation.

Many metropolitan areas in the far West are situated in valleys or low foothills surrounded by very high mountains. To serve these population centers, point-to-multipoint microwave stations are compelled to use transmitter sites on high mountains. And, they do not have the luxury of being able to move away to meet a prescribed minimum separation distance. For example, the metropolitan San Francisco area comprises a population density of over five million people living predominantly in lowland areas surrounded by high mountains. Virtually all MDS proposals to date have involved transmitters operating directionally from the several high mountains offering a commanding view of the population below, with heights of 2,000 to 4,000 feet above the population centers (e.g., Mt. Diablo, Mt. Tamalpais, San Bruno Mountain, Loma Prieta

Mountain, etc.). MDS and ITFS operations in such places must co-exist at a limited number of very high locations--options of relocating to a minimum separation distance or lowering antenna height generally are not available. Moreover, the presence of such mountains demands unique layouts in ITFS systems which will be at odds with the proposed rule changes, as discussed further below. The point is that Roman Catholic Communications has serious concerns over some of the proposed changes in the context of the realities of mountainous environments.

**Directional Operation more
Appropriate Alternative to
Distance Separation**

Roman Catholic Communications reminds that the majority of ITFS/MDS operations in mountainous areas do not operate non-directionally; rather they employ directional antennas with well-defined characteristics. The allocation of stations based on simple distance separation requirements is not workable in such areas. In a mountainous environment, stations can operate from sites within short distances of each other and serve different geographic areas without interference, based on directional antenna patterns. The FCC has recently made advances in other services by authorizing short-spacings based on the use of directional antenna patterns and considering intervening terrain effects; for the Commission to now institute a distance separation basis in the MDS service would be a step backward and a waste of spectrum.

**Assumed Antenna Heights in Notice
not Reflective of Unique
Characteristics of Mountainous Areas**

In developing its co-channel distance separation, the Notice at fn. 20 assumes an MDS antenna height of 180 meters above average terrain. In the view of Roman Catholic Communications, this is a gross understatement of the heights that actually exist in mountainous areas. In our experience, MDS proposals in the San Francisco Bay Area typically specify sites with heights of over 1,000 meters above population centers.

Roman Catholic's consulting engineer Frederick Spaulding observes that the Commission did not specify in the Notice how the height-above-average-terrain (HAAT) used in its range calculations was (and would be) computed (Notice at fn. 20), but if it involves the method of averaging values over eight radials spaced equally around the azimuthal plane, such as specified in Section 73.310, it will generally understate actual conditions. For a microwave station perched at the edge of a mountain range overlooking a populated valley, the averaging of terrain in directions away from the population and backward into the mountain range only serves to lower the resulting average. Moreover, with canny selection of radials falling over high mountains, a site can be computed to have a very low HAAT when it actually is perched thousands of feet over populated areas. Any HAAT calculations should only be done over populated areas, and only over those areas subtended by the pattern of a directional antenna.

ITFS is Fearful of Unlicensed Boosters

At fn. 20, the Notice contemplates allowing MDS to operate unlicensed boosters. Roman Catholic Communications is strongly opposed. A co-channel or adjacent-channel booster station placed in close proximity to a school at which there is an ITFS receiver could be totally disrupting to the ITFS operation. Even if the ITFS station were to be provided protection and the unlicensed booster station ultimately ordered to cease operation, the time entailed in pursuing such relief could involve a semester or full school year, and in the process students could be done irreparable harm. The only way to insure protection of ITFS interests is to continue to require licensing of all transmitters, even boosters.

Proposal Endorsed to Continue C/I Protection Ratios to ITFS

Roman Catholic Communications completely supports the proposal (Notice, ¶15) that existing ITFS receivers continue to be afforded C/I protection ratios. One of the basic advantages of ITFS broadcasting is that it allows distance learning--a learning site miles from an educational center can be afforded instruction via the projection of televised signals. As a result, some ITFS receivers are located forty or more miles from their transmitter site. If MDS stations were to be authorized solely on the basis of distance separation, they could very well locate in close proximity to existing ITFS receivers and cause massive interference,

effectively cutting schools off from their source of instruction. By requiring protection ratios at the antenna terminals of such receivers, the Commission would assure their continued existence. Roman Catholic Communications believes that it is not realistic, however, to limit protection ratios only to existing receivers.

If a school system cannot be guaranteed that all of its schools will have protected reception, its ITFS operation will not be permitted to expand. In rapidly growing cities, such as Las Vegas, the proposal would mean that schools that existed near the center of town could have the benefits of instructional television, but newer schools on the outskirts would not be protected from interference from a new MDS station. This seems clearly inequitable.

Requiring ITFS to Protect MDS Diserves Instructional Television

The Commission is considering that ITFS may have to afford protection to MDS operations (Notice at fn. 28). It is impossible to predict where new population centers will develop; entire towns have sprung out of deserts. If ITFS were to be required to provide protection to existing MDS stations, future schools arising in new population centers could be deprived of ITFS service. This seems clearly contrary to the Commission's stated goal to protect the interests of instructional television.

**30-day Period Unrealistically Short
for ITFS to Report Interference
from New MDS Operations**

Roman Catholic Communications supports the proposed requirement that a new MDS notify pertinent ITFS operators prior to commencement of operations (Notice at fn. 29), but believes that the 30-day period in which interference complaints must be received is unrealistically short. It is the Roman Catholic Communications experience that there is a noticeable time lag before reports of a reception problem are fed back to the ITFS transmission facility. Often, interference is chalked up by students as a temporary problem, and it is not reported for many days to responsible instruction coordinators. Sometimes, too, reception problems are attributed by non-technical personnel to unrelated causes, such as weather or nearby construction work. Either way, interference complaints may be delayed by days or even weeks. There is the additional consideration that the MDS operations might commence during school vacations or semester breaks when no one is present at the schools to even perceive the problem. Even after complaints are received, it can be several more days before technical assistance can be dispatched to check into the problem and to trace it to interference. Thereafter, even more time is consumed in formalizing a complaint. The net result of such unavoidable delays is that a 30-day notification period is impractical. Roman Catholic Communications believes a 60-day period to be the minimum necessary, and is of the view that 90 days would be more realistic.

**Changing Application Processing
Bureau seems Unlikely Solution**

Moving the processing function to the Private Radio Bureau seems illogical unless the Commission contemplates also moving the Common Carrier Bureau's MDS experts to Gettysburg. A move would otherwise undesirably signal either that there is idle manpower in Gettysburg or that one bureau chief is somehow a better manager than another. Logically, the unavoidable interplay between ITFS and MDS suggests that the two services be administered in the same bureau. Moreover, MDS has developed into a medium for the distribution of video entertainments on a subscription basis and is being nourished by the Commission as a competitor to wired television. The credible case can, accordingly, be made for assigning it to the Mass Media Bureau.

Respectfully submitted,

ROMAN CATHOLIC COMMUNICATIONS
CORPORATION OF THE BAY AREA

By: 

Sol Schildhouse

FARROW, SCHILDHAUSE & WILSON
1400 16th St., N.W., Suite 501
Washington, D.C. 20036
(202) 328-1800

Its Attorneys

June 26, 1992